Gulf of Mexico Harmful Algal Bloom Bulletin

3 January 2005

National Ocean Service

National Environmental Satellite, Data, and Information Service

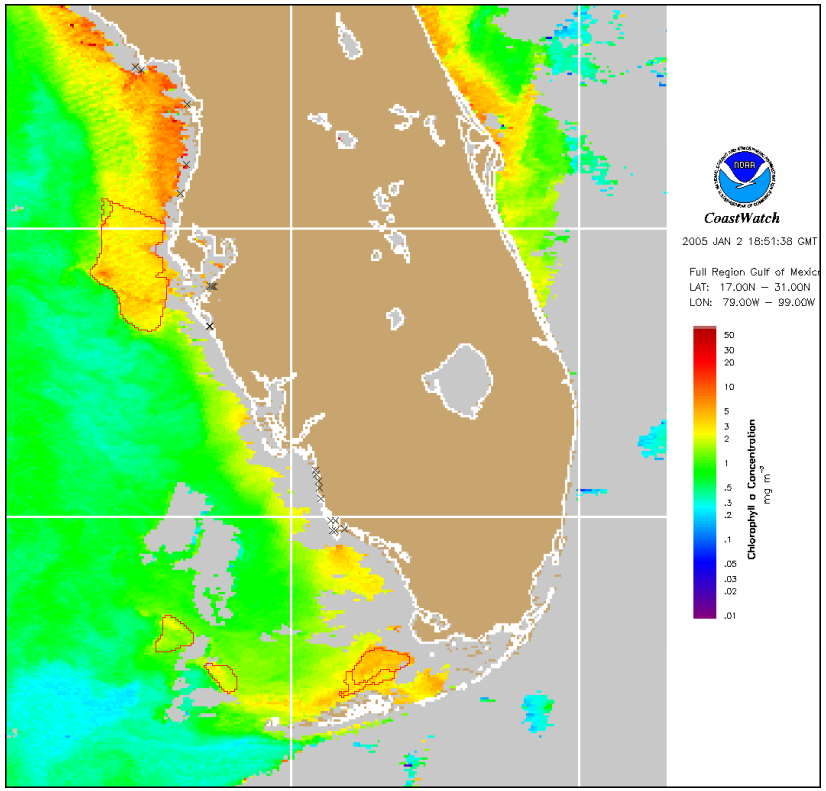
Last bulletin: December 29, 2004

Conditions:
A harmful algal bloom has been identified north of the lower Keys. Low to moderate impacts at the beach are possible through Thursday, as well as some water discoloration.

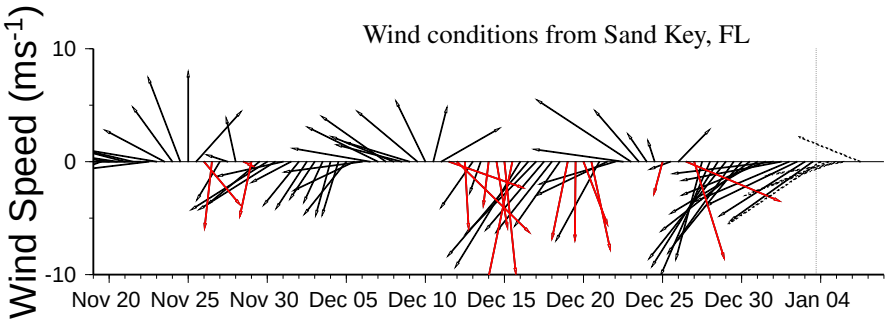
Analysis: The harmful algal bloom located north of the lower Keys has decreased in extent and intensity over the past several days. Maximum chlorophyll levels of approximately 6 μg/L are located at 81°11'W, 25°00'N on the eastern edge directly south of Cape Sable. Clouds have obscured further eastern extents of the bloom. The bloom presently extends southward to 81°56'W, 24°36'N and westward to 82°39'W, 25°00'N, with a center point at 81°49'W, 24°43'N. The bloom is a mixture of K. brevis and diatoms (primarily Rhizosolenia). Strong easterlies will mitigate impacts at the beach as well as onshore or eastward movement of the bloom through Thursday.

The elevated chlorophyll feature offshore of Cedar Key has expanded further south to the Sarasota region (82°57'W, 27°17'N); however, chlorophyll levels have weakened throughout much of the feature. No K. brevis was identified in Cedar Key samples collected December 27 by FWRI. This feature is unlikely to be Karenia. Reports of discolored water are possible.

~Fisher, Bronder

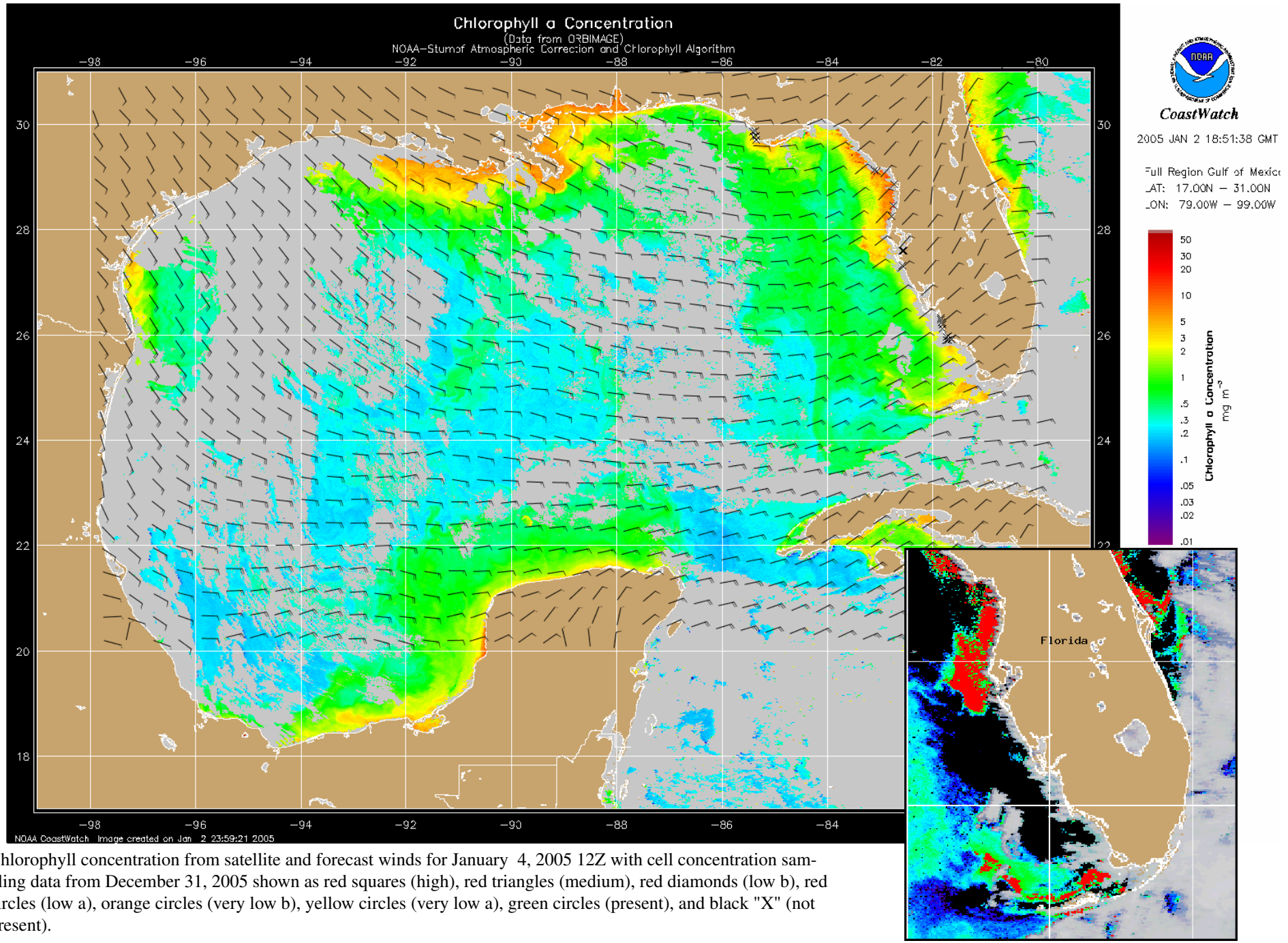


Chlorophyll concentration from satellite with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 31, 2005 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).



Wind speed and direction are averaged over 12 hours from measurements made on buoys. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

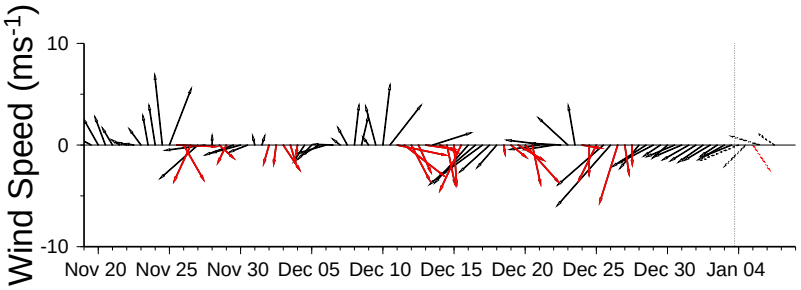
Strong easterly winds near 20 knots (10m/s) are forecasted today through Thursday in the lower Keys. Easterly winds (5-10 knots, 2-5 m/s)in the Cedar Key and Sarasota regions expected through Wednesday, then becoming southeasterly.



Chlorophyll concentration from satellite and forecast winds for January 4, 2005 12Z with cell concentration sampling data from December 31, 2005 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).

Blooms shown in red (see p. 1 analysis and image for interpretation)

Wind conditions from Cedar Key, FL



Wind conditions from Egmont Key, FL